

COVID-19 MORTALITY – DATA UPDATE – 18 DECEMBER 2021

Update of the information on COVID-19 deaths during the first epidemic wave before 31 August 2020

A retrospective survey was conducted among the 104 Belgian hospitals¹ to retrieve missing data on the date of birth and place of residence of patients who died of COVID-19 during the first wave.

BACKGROUND

COVID-19 deaths occurring in the hospital are reported to Sciensano by hospital staff via a LimeSurvey questionnaire as part of the daily Hospital Surge Capacity Survey (SCS).

The data currently available via this questionnaire are: date of death, date of birth, gender, diagnostic method, postal code of residence, and type of residence (nursing home, other long-term care institution,...).

Three of these variables were not available during the first wave of the epidemic: (i) **date of birth** (until April 24, 2020, only the year of birth of deceased patients was reported by the hospital), (ii) **postal code of residence** (available since April 24, 2020), (iii) **type of residence** (available since June 21, 2020).

OBJECTIVES

From 1 July to 29 October 2021, a survey was conducted by Sciensano among the 104 Belgian hospitals to try to retrieve the missing data for patients who died of COVID-19 in their institution until 31 August 2020.

The retrieval of these data provides the following improvements:

- (i) The **full date of birth** allows for unequivocal identification of the deceased and thus for cross-checking the information from the SCS with that from the nursing home (NH) surveillance.
- (ii) The **postal code of residence** allows cross-checking with the all-cause mortality statistics, which are based on the postal code of residence of the deceased.
- (iii) **Type of residence** allows for a more accurate assessment of the number of deaths among NH residents that occurred in a hospital setting.

¹ 103 general hospitals and the military hospital

An additional potential benefit of the survey was the ability to retrospectively identify errors or missing deaths. Indeed, manual data entry is inevitably subject to human error. Also, some patients initially identified as having died of COVID-19 may have had their diagnosis reassessed. Finally, some COVID-19 deaths may not have been reported by the hospital surveillance system during the first wave.

RESULTS

The period for which the data was updated is the period before 31 August, 2020.

1. Participation

The response rate was excellent, with 98 out of 104 hospitals (94.2%) responding to our solicitation.

Of the hospitals that participated (n = 98), 72 hospitals responded to our initial invitation (73%) and 26 hospitals responded after receiving a reminder (27%).

Six hospitals did not participate in the survey, leaving 226 COVID-19 deaths with incomplete data (Table 1). For these, we are still missing one or more of the following variables: date of birth, sex, type of residence, postal code of residence.

Table 1 • Information by region regarding non-participation of 6 hospitals in the COVID-19 in-hospital mortality survey, before 31 August, 2020

	Number of hospitals that did not participate in the survey	Number of corresponding COVID-19 deaths
Flanders	3	112
Wallonia	3	114
Brussels	0	0
Total	6	226

2. Qualitative changes (the variables retrieved)

On 1 July 2021, the COVID-19 mortality database contained 4,979 hospital deaths for the period 10 March to 31 August 2020. The results in this section refer to the data collected before possible duplicates were removed.

Date of birth

Thanks to the survey, the date of birth of 2,810 deceased was retrieved. For 79 deceased, a date of birth was already available, but it turned out not to be correct. The dates of birth of 175 persons deceased of COVID-19 in hospital are still missing for the period concerned by the survey.

Date of death

The date of death has been changed for 261 of the deceased.

Postal code of the place of residence

Thanks to the survey, 2,852 postcodes of places of residence of deceased could be retrieved. The postcode is still missing for 379 deceased.

Profile

The profile (type of residence) of 2,759 COVID-19 deaths was retrieved. Of these, 846 were residents of NH and 40 were residents of other institutions. The total number of COVID-19 deaths in the NH decreased by 25 deaths (20 in Flanders and 5 in Brussels), because these persons had died in the hospital and not in the NH. For 1,494 of the deaths in hospital, in the period before 31 August 2020, the type of residence is still unknown.

Case definition

There were 8 deaths where the diagnostic status had to be changed. One death was changed from a possible case to a confirmed case, 7 COVID-19 deaths became non-COVID-19 deaths (4 confirmed and 3 possible cases).

Country of residence

Twenty-five changes were made to the country of residence (all concerning persons actually living abroad and therefore not included in the database to avoid double-counting in international statistics).

3. Quantitative changes (change in total number of deaths)

Thanks to the survey, we identified 196 additional COVID-19 deaths. However, based on the additional data provided by the hospitals, we also removed 97 deaths from the COVID-19 mortality database for the following reasons: 58 corrections of double reporting of deaths (duplicates), 25 persons residing outside of Belgium, 7 initial coding errors, 7 deaths whose cause of death was no longer related to COVID-19. The largest changes made by the hospitals were the exclusion of 5 COVID-19 deaths and the addition of 45 COVID-19 deaths.

Finally, the net result is an **increase of 99 deaths in the COVID-19 mortality database (all places of death together) for the period between 7 March and 31 August 2020** (-7 deaths in Flanders, +30 deaths in Wallonia and +76 deaths in Brussels). This change was implemented in the COVID-19 mortality database on Friday 17 December 2021 for publication on Saturday 18 December 2021.

The date of the first COVID-19 death in Belgium has been changed from 10 March 2020 to 7 March 2020. The peak in the number of COVID-19 deaths in the first wave is still on the same date, 8 April 2020, but increases from 322 deaths to 324 deaths (Figure 1).

The number of COVID-19 deaths during the first wave of the epidemic (until 21 June 2020) is currently 9,684 (4,861 in hospitals, 4,718 in NH, and 105 in other settings).



Figure 1 • Total number of COVID-19 deaths reported in hospitals, before and after the survey, before 31 August 2020, Belgium